Address Validation Tools

Federal Mail Education Forum
June 3, 2015

Angela Lawson – Manager, Address Quality Programs
United States Postal Service®

Overview

- Why validation matters

- What is a quality address

- Address validation tools
  - CASS™
  - AEC/ AECII®
  - Change of Address
  - Secure Destruction

- Pulling it all together

America is Growing

1.07 million new addresses created in FY14

Why Address Validation Matters

- Address Validation is one of the key components to your mailing process

- Addresses that do not validate are at risk of non-delivery

- Addresses need to be
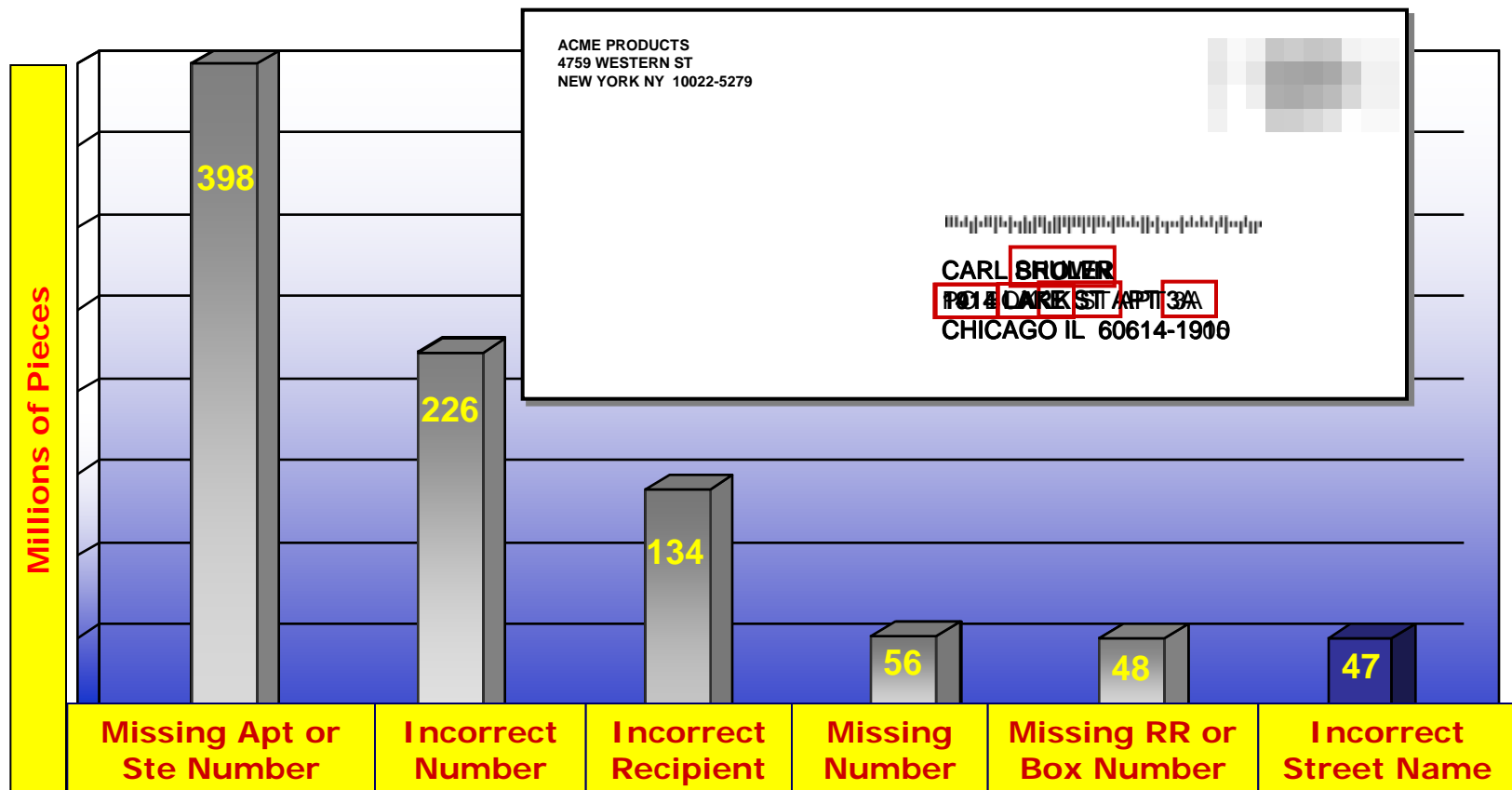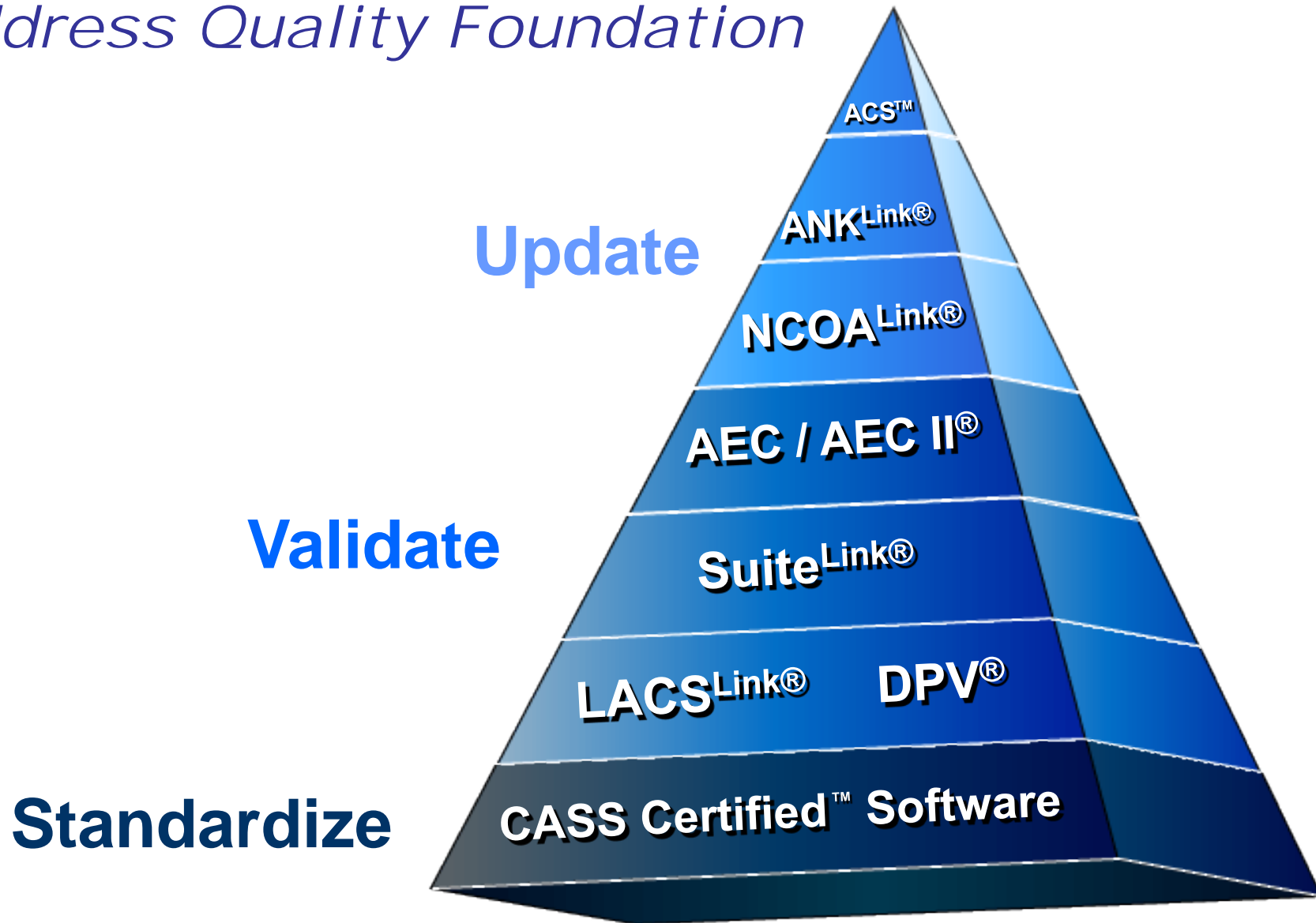 - Complete
  - Correct
  - Current

Address Quality

- Complete the address
  - Leverage software and data to provide the missing information
    - ZIP + 4®, street name, directional, primary and secondary numbers, city, state
- Correct the address
  - Verifies address is deliverable
  - Corrects misspellings
  - Ensures the city, state, and ZIP Code™ are correct
- Keep the address current
  - Person, family, or business moved
  - Municipality introduced changes

Address Quality Foundation

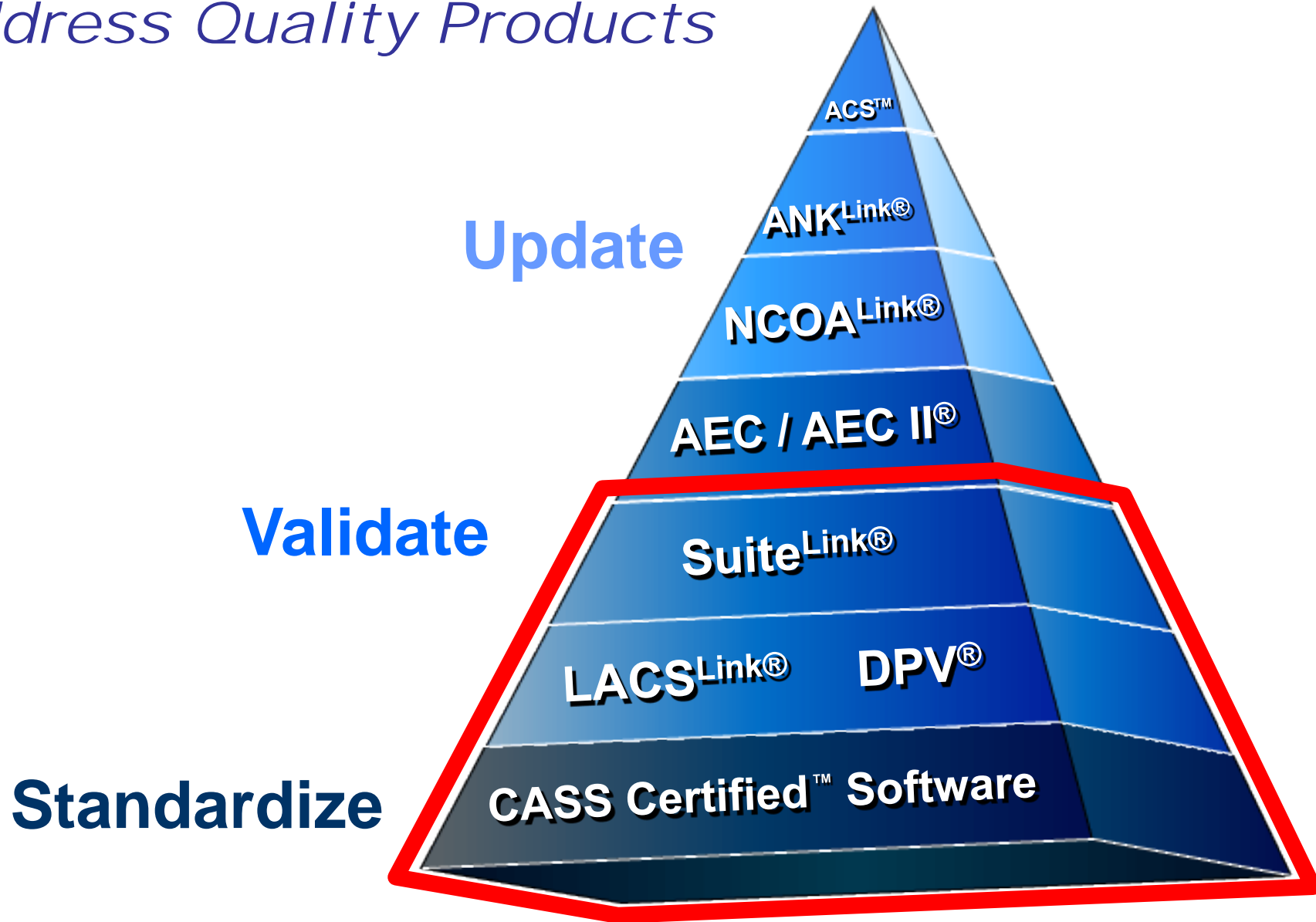Update

Validate

Standardize

ACS™
ANK Link®
NCOA Link®
AEC / AEC II®
Suite Link®
LACS Link®   DPV®
CASS Certified™ Software

Address Quality Products

Update
Validate
Standardize

ACS™
ANK Link®
NCOA Link®
AEC / AEC II®
Suite Link®
LACS Link® DPV®
CASS Certified™ Software

CASS™ Product

- USPS® certified benchmark

- Sets minimum performance standards for commercial ZIP + 4® address matching software

- Developers must pass USPS® test for CASS certification
  - CASS Vendor List
    https://ribbs.usps.gov/files/vendors/#index.txt

- Address matching software attempts to match addresses against range-based records on USPS ZIP + 4 files

- Provides carrier route assignment

- Pre-Mailing process

CASS™ Product Return Codes

CASS Certified™ software products return codes indicating address assignment

10	Invalid Address	22	Multiple Responses
11	Invalid City/State/ZIP	23	Error in Primary
12	Invalid State	31	Single Response
13	Invalid City	32	Default Response
17	Insufficient Data	33	Non-deliverable
21	Address Not Found		

CASS™ Product Return Codes

CASS Certified™ software products return codes indicating address assignment

10	Invalid Address	22	Multiple Responses
11	Invalid City/State/ZIP	23	Error in Primary
12	Invalid State	31	Single Response
13	Invalid City	32	Default Response
17	Insufficient Data	33	Non-deliverable
21	Address Not Found		

DPV® / DSF²®

- Incorporated into CASS Certified™ Address Matching software

- Confirms the existence of a specific delivery point in AMS

  - Identifies additional information about that address

    - commercial mail receiving agency

    - Helps identify vacancies

- Helps to reduce UAA

**100 MAIN ST
ANYTOWN TN 38138-6038   Confirmed**

**104 MAIN ST
ANYTOWN TN 38138-6038   Not Confirmed**

DPV® / DSF²® Footnote Codes

Code	Description	Code	Description
AA	Input Address Matched to the ZIP+4 file	P1	Input Address RR or HC Box number invalid
A1	Input Address Not Matched to the ZIP+4 file	P3	Input Address PO, RR, or HC Box number invalid
BB	Input Address Matched to DPV *(all components)*	RR	Input Address Matched to CMRA and PMB designator present (PMB 123 or #123)
CC	Input Address Primary Number Matched to DPV but Secondary Number not Matched *(present but invalid)*	R1	Input Address Matched to CMRA but PMB designator not present (PMB 123 or #123)
N1	Input Address Primary Number Matched to DPV™ but Address Missing Secondary Number	F1	Input Address Matched to a Military Address
M1	Input Address Primary Number Missing	G1	Input Address Matched to a General Delivery Address
M3	Input Address Primary Number Invalid	U1	Input Address Matched to a Unique ZIP Code
On footnotes of F1, G1 and U1 move "Y" to the DPV return code and spaces to all other flags.			

DPV® / DSF²® Footnote Codes

Code	Description	Code	Description
AA	**Input Address Matched to the ZIP+4 file**	P1	**Input Address RR or HC Box number invalid**
A1	**Input Address Not Matched to the ZIP+4 file**	P3	**Input Address PO, RR, or HC Box number invalid**
BB	**Input Address Matched to DPV** *(all components)*	RR	**Input Address Matched to CMRA and PMB designator present (PMB 123 or #123)**
CC	**Input Address Primary Number Matched to DPV but Secondary Number not Matched** *(present but invalid)*	R1	**Input Address Matched to CMRA but PMB designator not present (PMB 123 or #123)**
N1	**Input Address Primary Number Matched to DPV™ but Address Missing Secondary Number**	F1	**Input Address Matched to a Military Address**
M1	**Input Address Primary Number Missing**	G1	**Input Address Matched to a General Delivery Address**
M3	**Input Address Primary Number Invalid**	U1	**Input Address Matched to a Unique ZIP Code**

On footnotes of F1, G1 and U1 move "Y" to the DPV return code and spaces to all other flags.

![United States Postal Service logo]

DPV® Tables

A	Address Table
C	CMRA (Commercial Mail Receiving Agency)
F	False Positive (Integrity)
P	PBSA (PO Box Street Address)
V	Vacant
X	No-stat (address not counted for delivery)

DSF²® Tables

A	Address Table
B	Business
C	CMRA (Commercial Mail Receiving Agency)
D	Drop Address
E	Educational
F	False Positive (Integrity)
L	LACS
P	PBSA (PO Box Street Address)
S	Seasonal
T	Throwback
V	Vacant
X	No-stat (address not counted for delivery)

LACS^{Link®}

- Incorporated into CASS Certified™ Address Matching software

- Converts addresses that are changed by local governments
  - Rural route to street style conversion
  - Renumbering changes
  - Street name changes

Old Style	New Style
RR 5 Box 234	5471 Apple Drive
471 Main St	1471 Main St
987 Edgewater Dr	987 Waterways Blvd

Delivery point remains the same and the residents have not moved, but the address has been changed.

LACS^{Link®} Return Codes

A	**LACS^{Link} Record Match** – The input record matched to a record in the master file. A new address could be furnished.
00	**No Match** – The input record COULD NOT BE matched to a record in the master file. A new address could not be furnished
09	**LACS^{Link} Record Match**: Highrise Default – The input record matched to a record in the master file, but the old address is a high-rise default.
14	**Found LACS^{Link} Record**: New Address Would Not Convert at Run Time – The input record matched to a record in the master file. The new address could not be converted to a deliverable address
92	**LACS^{Link} Record**: Secondary Number Dropped from Input Address – The input record matched to a master file record, but the input address had a secondary number and the master file record did not. The record is a ZIP + 4 street level or high-rise match

Suite^{Link}® Product

- Improves address assignments to business addresses by adding known secondary (suite) numbers

- Provided a business name and an associated ZIP + 4® coded address matches to a high-rise default, the Suite^{Link} process will return the appropriate suite number when available

18

Suite^{Link}® Return Codes

A	Suite^{Link} Record Match – The input record matched to a record in the master file. An improved business address could be furnished.
00	No Match – The input business name and/or address COULD NOT BE matched to a record in the master file.
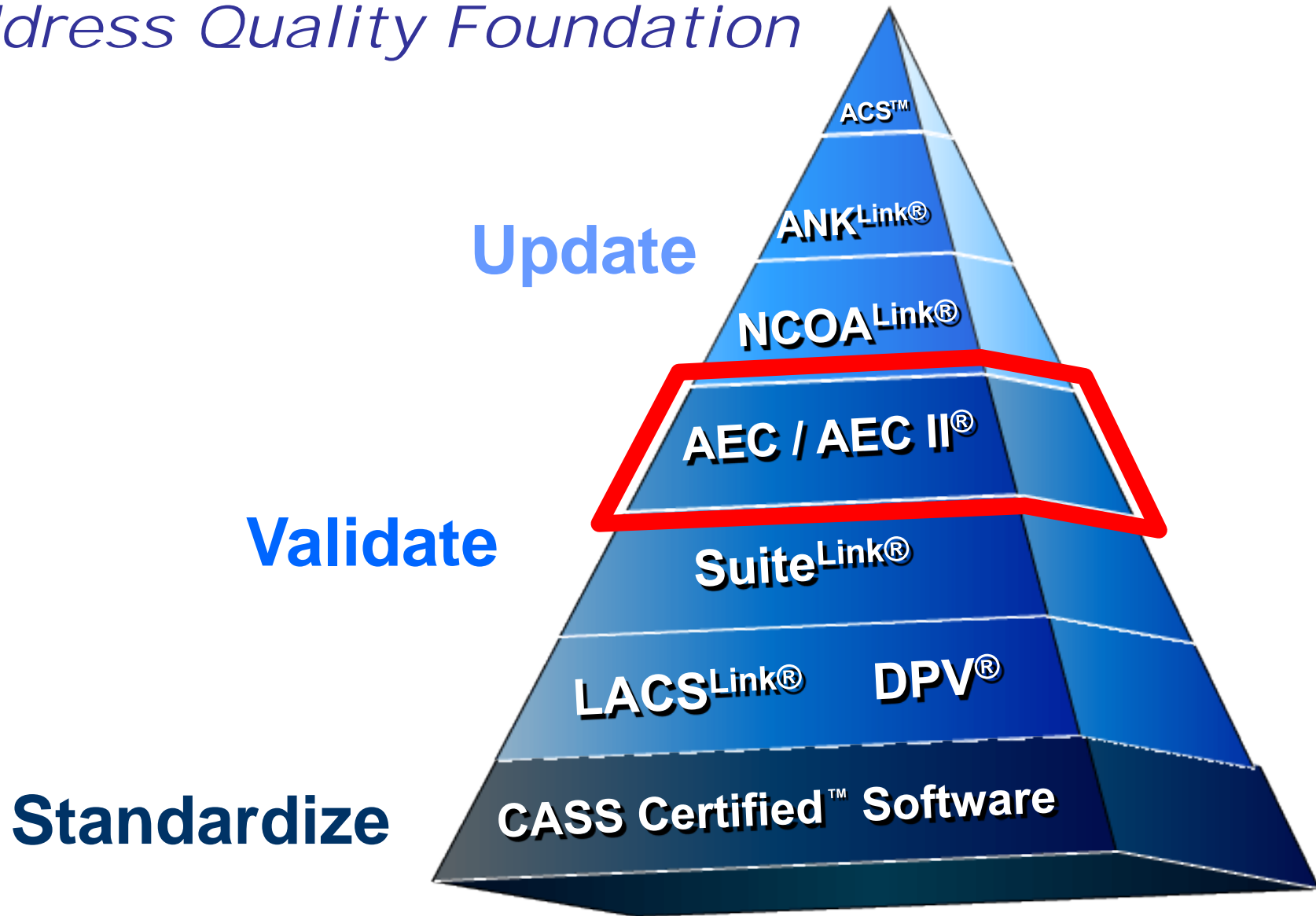
AEC & AEC II®

- AEC provides a crucial "last resort" approach to stubborn addresses
  - USPS® service to help correct addresses that CASS Certified™ software cannot fix

- Resolves physical address deficiencies

- Costs $21.00 per thousand

- Average correction rate - 38%

- Pre-Mailing process

AEC & AECII® Service

- AECII expands AEC processing

  - Leverages Delivery Force Knowledge™ for addresses that AEC cannot correct

- AEC II cost - $0.32 per record

  - Average: 85% resolution rate

  - Average: 51% correction rate

Address Quality Products

Update

- ACS™
- ANK Link®
- NCOA Link®

Validate

- AEC / AEC II®
- Suite Link®
- LACS Link®
- DPV®

Standardize

- CASS Certified™ Software
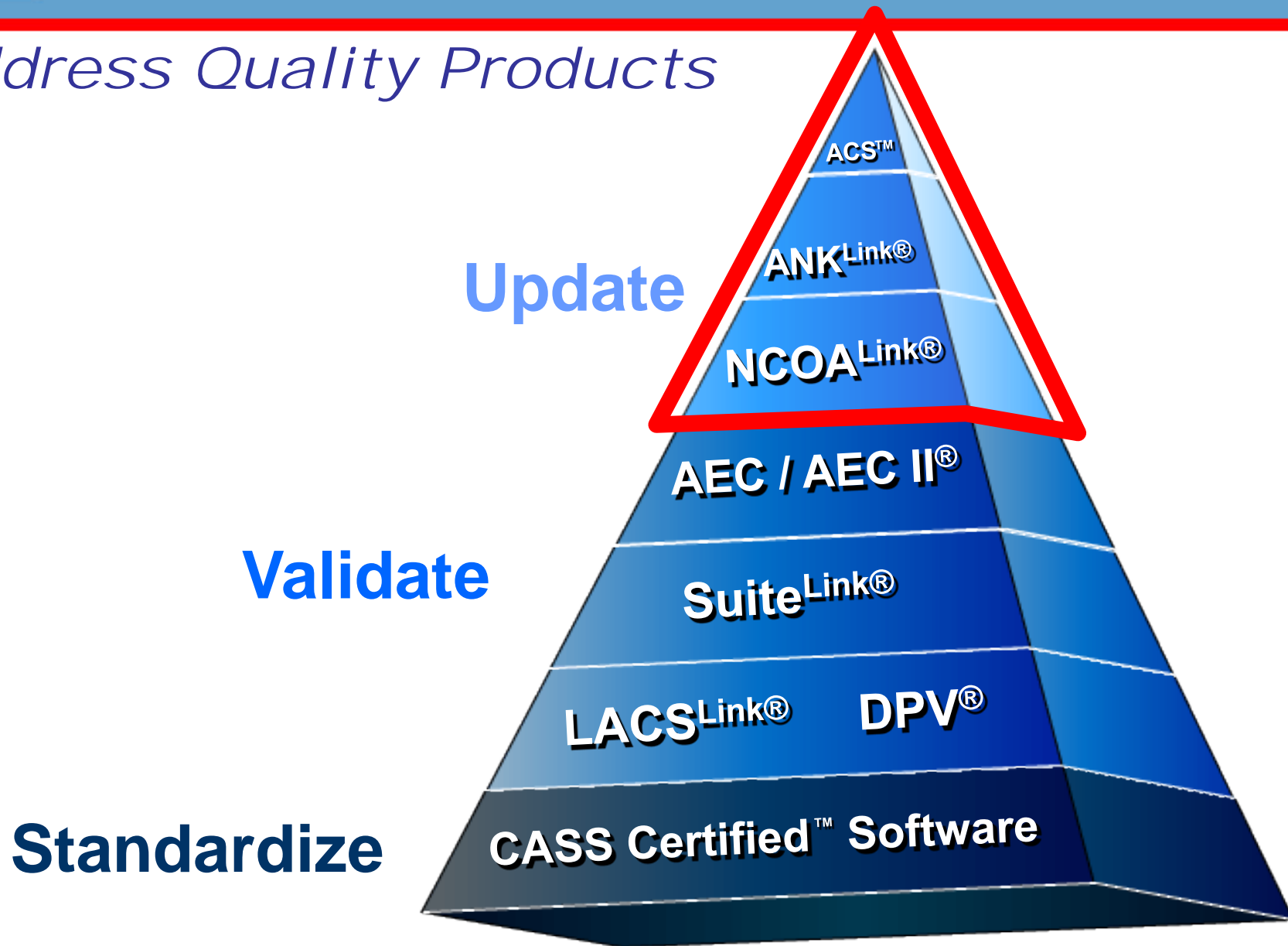
NCOA$^{Link®}$

- USPS® licensed product using address change information when individuals or businesses inform the USPS of their move

- Provides electronic Change-of-Address information

- Average correction rate (with new address) – 3.41%

- Three different license types

- Variable costs

- Pre-Mailing process

NCOA$^{Link®}$ Service

- A pre-mailing Move Update method leveraging USPS® provided data

- Data delivery from USPS to certified licensees

- Four levels of usage for certified licensees:

  - End User Mailer
    (18 months of data updated monthly)

  - Limited Service Provider
    (18 months of data updated weekly)

  - Mail Processing Equipment
    (18 months of data updated weekly)

  - Full-Service Provider
    (48 months of data updated weekly)

NCOA^{Link®} *Footnote Codes for Matching Records*

A	Match	COA Match: The input record matched a COA record.
91	Match	COA Match: Secondary Number dropped from COA.
92	Match	COA Match: Secondary Number dropped from input address.
01	Match	Found COA: Foreign Move. Foreign Move. The customer has moved to a foreign address.
02	Match	Found COA: Moved Left No Address (MLNA). The input record matched a COA record, but there was no new address provided.
03	Match	Found COA: Box Closed No Order (BCNO). The input record matched a COA record, but the PO BOX has been closed and no forwarding addresses was provided.

NCOA^{Link®} *Footnote Codes for Non-Matching Records*

00	No Match	The input record did not match a COA record.
04	No Match	Family match to a COA with a secondary address, but no secondary address was provided on input.
06	No Match	There is more than one COA record and the middle names are different.
07	No Match	There is more than one COA record and the genders are different.
08	No Match	The input record matched two COA records.
09	No Match	The input record matched a COA record from a high-rise address.
10	No Match	The input record matched a COA record for a rural or highway contract route.
11	No Match	The input record matched a COA record with the same surname and address, but there is insufficient name information on the COA record to produce a match.
19	No Match	There is a change of address on file but the new address cannot be ZIP + 4 coded. The new address cannot be confirmed on DPV or the new address is temporary.

ANK^{Link®} Service

- A valuable add-on to NCOA^{Link®} Limited Service Providers and End User Mailers

- Provides an indicator that a move may have occurred in months 19 through 48

  - Does not contain the actual new address

- Allows for more value out of move update processing

  - Only the flagged addresses need to be sent to a 48-month NCOA^{Link} Full-Service Provider

ACS™

- Provides electronic notices for undeliverable mailpieces

  - Change-of-address (COA)

  - Other reasons for non-delivery

- Traditional ACS™, OneCode ACS® or Full-Service ACS

- Requires an ancillary service endorsement

- Can reduce costs associated with manual returns and manual keying of data

- Centralized fulfillment option (SingleSource)

- Post-Mailing process

ACS™ Return Codes

K	Customer has moved and left no forwarding address	M	No mail receptacle
G	Customer's P.O. Box™ has been closed and no forwarding address was filed	N	No such number
W	Matched with a COA order for a temporary change of address	P	Deceased
A	Attempted, not known	Q	Not deliverable as addressed / unable to forward
B	Returned for better address	R	Refused
D	Outside delivery limits	S	No such street
E	In dispute	U	Unclaimed
I	Insufficient address	V	Vacant
L	Illegible	X	No such office

ACS™ Service

- Participants include an identification code on mailpieces and receive the change-of-address data directly from the USPS®

- Example of participant code and keyline

```
#BWNFXZT
#P123456789  2572X    7 #
JOHN E SMITH
916 N 5TH ST APT 3
SPRINGFIELD IL  62702-5288
```

ACS participant code provided by Postal Service™

ACS key line provided by the mailer for nixies

```
NATIONAL CUSTOMER SUPPORT CENTER
225 N HUMPHREYS BLVD STE 501
MEMPHIS TN  38188-1001
```
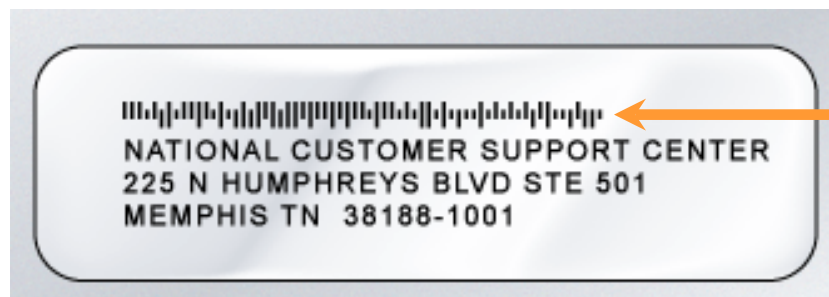
Information contained in barcode (MID, STID, keyline)

STID Characteristics

What is a Service Type ID?

- The Intelligent Mail® barcode allows the 3-digit Service Type ID field to contain information that USPS® uses to meet your business needs by requesting extra services

- These services include:
  - Mail piece disposition if undeliverable
  - Address correction options
  - IMb Tracing®
  - Secure Destruction

Secured Destruction

If we can't cut the volume, we can cut the cost!

- Reduces USPS® costs of returning First-Class UAA mail
  - $0.43 per piece to return $0.11 to waste

- Potential to reduce mailer costs associated with handling and destroying returned mail

Ask yourself: **Do you really need the mailpiece back?**
You can trust the USPS® to securely destroy your mailpieces.

1 Code address via CASS Certified™ address matching software with DPV® and LACSLink®

2 Did the address DPV Confirm? Y/N

NO →

3 Send bad addresses to AEC/AEC II®

4 Bad address fixed/ZIP + 4® coded?

YES (from 2) ↓

6 Update movers (NCOALink) (pre mailing process)

7 Apply ACS™ to mail piece (post mailing process)

8 Mail

9 Update address list with new ACS information

YES →

NO →

5 Suppress bad addresses from mailing list

Best Mail Quality

Summary

- The quality of your address data directly affects the deliverability of your mail!

- USPS® provides an extensive suite of Address Quality products and services; check out *ribbs.usps.gov*.

- USPS is committed to continuous address hygiene improvements to enhance the value of mail.

For More Information

ribbs.usps.gov

National Customer Support Center

National Customer Support Center

1-800-238-3150

Thank You!

Glossary

DPV® – Identify inaccurate or incomplete addresses

LACS – Locatable Address Conversion System. Automated process of obtaining new address when the address has been changed by the local planning authority or building management

Suite^Link® – Improves address assignments to business addresses by adding known secondary (suite) numbers

AEC – Address Element Correction. Corrects and standardizes address elements on the worst addresses not resolved by CASS™

NCOA – National Change of Address. Aids mailers in identifying address changes before mail enters the mail stream

ANK – Attempted Not Known. For NCOA^Link® limited service providers and end user mailers. ANK^Link® is an enhancement to the existing 18 month NCOA^Link product. ANK^Link provides an additional 30 months of COA information.

ACS™ – Cost effective means of obtaining accurate change of address information

UAA – Undeliverable As Addressed

Who Must Use Move Update?

- Presorted or Automation discounts for First-Class Mail®

- Standard Mail® discounts

- Addresses on mailpieces updated using an approved method within 95 days prior to the mailing date

- First-Class Mail or Standard Mail mailpieces with exceptional or an alternative address format are not required to meet Move Update (mail is not forwarded)

  - Or Current Resident

  - Postal Customer

"Default" Undeliverable Mail Treatment

- The default treatment for **First-Class Mail**® is to forward or return it with no additional postage paid and no separate address correction notice

- **Periodicals** are forwarded for 60 days and an address correction is sent after 60 days (PS Form 3579). Any further pieces are discarded. If Nixie, a notice is sent every time.

- **Standard Mail**® and **Bound Printed Matter** is discarded with no notice to the mailer

- **Standard Post, Parcel Select, Media Mail,** and **Library Mail** are forwarded to the addressee as Postage Due. Nixies are returned, forwarding (if appropriate) and return postage is charged.

Address Service Requested

- Option 1
  - Forward if possible, return if not
  - Available with Manual or ACS™ notice for forwarded pieces only
  - Requires weighted fee for returned Standard Mail®
- Option 2 – Available via ACS only
  - Forward if possible, return if not
  - ACS notice provided for forwarded and returned pieces
  - Requires weighted fees for returned Standard Mail

The weighted (per piece) fee is the First-Class Mail® or Priority Mail single-piece price, plus any nonmachinable surcharge multiplied by 2.472; rounding any fractions to the next whole cent. So:

49¢ x 2.472 = $1.22

Change Service Requested

- Option 1
  - All UAA mail is discarded
  - Available with Manual or ACS™
  - *Except: First-Class Mail® requires ACS!*
- Option 2 – Available via ACS only
  - Forward if possible, all others discarded
  - ACS notice provided for both
  - Currently only available for First-Class Mail.
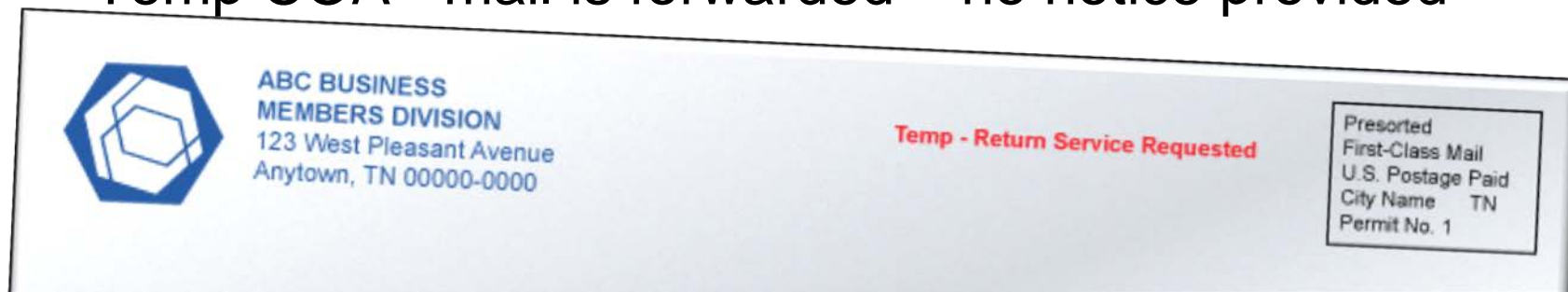 - Soon to be available for Standard Mail letters & flats & Bound Printed Matter with an IMb™.

ABC BUSINESS

Change Service Requested

Presorted
First-Class Mail
U.S. Postage Paid
City Name   TN

No Weighted Fee!

Return Service Requested

- Option 1
  - Manual Service Type ID & print the endorsement
  - All UAA mail is returned to sender
  - No separate notice provided
    - First-Class Mail® returned at no additional charge
    - Standard Mail® returned at First-Class Mail single-piece price
- Option 2 – Available via ACS™ only
  - All UAA mail is returned to sender at prices above
  - ACS notice also provided

ABC BUSINESS
MEMBERS DIVISION
123 West Pleasant Avenue
Anytown, TN 00000-0000

Return Service Requested

Presorted
First-Class Mail
U.S. Postage Paid
City Name   TN
Permit No. 1

Temp - Return Service Requested

- Option 1 – First-Class Mail® ONLY
  - Manual Service Type ID & print the endorsement
  - Permanent COA & UAA mail is returned to sender
    - First-Class Mail returned at no charge
  - Temp COA - mail is forwarded – no notice provided

- Option 2 – Available via ACS for First-Class Mail ONLY
  - Permanent COA & UAA mail is returned to sender at no charge
  - ACS notice also provided
  - Temp COA - mail is forwarded – no notice provided

ABC BUSINESS
MEMBERS DIVISION
123 West Pleasant Avenue
Anytown, TN 00000-0000

Temp - Return Service Requested

Presorted
First-Class Mail
U.S. Postage Paid
City Name   TN
Permit No. 1

Forwarding Service Requested

- Option 1
  - Forward if possible, return if not
  - Reason for UAA provided only if returned
  - This is the same as the 'default' treatment for First-Class Mail®
  - Not recommended for Standard Mail®
  - Requires weighted fee for returned Standard Mail
  - Not available with ACS
  - Does not meet Move Update standards

The weighted (per piece) fee is the First-Class Mail or Priority Mail single-piece price, plus any nonmachinable surcharge multiplied by 2.472; rounding any fractions to the next whole cent. So:

49¢ x 2.472 = $1.22

45

STID Information

ribbs.usps.gov/stids

Table of STIDs

First-Class Mail table:

Class of Mail	Address Correction Option	Nonautomation w/o IMb Tracing™	Nonautomation with IMb Tracing	Full-Service w/o IMb Tracing	Full-Service with IMb Tracing
		300	310	260	270
First-Class Mail	No Address Corrections				
	Manual				
	OneCo…				
	OneCo…				
	OneCo…				
	OneCo…				
	OneCo…				
	OneCo…				
	Full-Se…				
	Full-Se…				
	Full-Se…				
	Full-Se…				
	Full-Se…				
	Full-Se…				
	Traditi…				
	Traditi…				
	Traditi…				
	Traditi…				
	Traditi…				

Standard Mail table:

Class of Mail	Address Correction Option	Nonautomation w/o IMb Tracing™	Nonautomation with IMb Tracing	Full-Service w/o IMb Tracing	Full-Service with IMb Tracing
		301	311	261	271
Standard Mail	No Address Corrections				
	Manual…				
	OneCod…				
	OneCod…				
	OneCod…				
	OneCod…				
	OneCod…				
	Full-Serv…				
	Full-Serv…				
	Full-Serv…				
	Traditio…				
	Traditio…				
	Traditio…				

Bound Printed Matter table:

Class of Mail	Address Correction Option	Nonautomation w/o IMb Tracing™	Nonautomation with IMb Tracing	Full-Service w/o IMb Tracing	Full-Service with IMb Tracing
		401		265	
Bound Printed Matter	No Address Corrections				
	Manual…				
	OneCod…				
	OneCod…				
	OneCod…				
	OneCod…				
	Full Serv…				
	Full Serv…				
	Tradition…				
	Full Serv…				
	Tradition…				

Periodicals table:

Class of Mail	Address Correction Option	Nonautomation w/o IMb Tracing™	Nonautomation with IMb Tracing	Full-Service w/o IMb Tracing	Fu…
		704	044	264	
	Manual Corrections				
Periodicals [1,2]	OneCod…				
	OneCod…				
	Full Serv…				
	Full Serv…				
	Tradition…				

1. For Periodicals, the follo…

Priority Mail / Critical Mail / Reply Mail table:

Class of Mail		Nonautomation w/o IMb Tracing™	Nonaut… with IM…
Priority Mail®	Priority Mail	710	
	Priority Mail FlatRate	712	
Critical Mail	Critical Mail	060	
	Courtesy Reply Mail	703 **** or 700	
Reply Mail	Business Reply Mail	708	

STID Characteristics

- **Mail Class**
  - First-Class
  - Periodicals
  - Standard
  - Package Services

- **Mail Entry Option**
  - Full-Service
  - Basic
  - Non-Automation

- **IMb Tracing®**
  - Barcode scans that provide status information of a mailpiece
  - This discussion addresses Destination IMb Tracing

STID Characteristics

- **UAA Disposition**
  - Forward
  - Return
  - Discard

- **Address Correction Type, if any**
  - None
  - Hardcopy
  - ACS™
    - OneCode ACS®
    - Full-Service ACS
    - Traditional ACS (#B - - - - - - -)

What is Move Update?

Move Update describes the process of periodically matching a mailer's address records with customer-filed Change-of-Address orders received and maintained by the Postal Service™

Move Update =

Fewer Forwarded and Returned Mailpieces

Move Update Methods

- **NCOA^{Link®}** - including both pre-mail NCOA^{Link} processing systems and the physical mailpiece processing equipment system: Mail Processing Equipment (MPE).

- **ACS**

- **Applicable ancillary service endorsements** under 507.1.5.1 or 507.1.5.3, except "Forwarding Service Requested." Just printing the endorsement on the piece does not meet the requirement!

- **For First-Class Mail®, and First-Class Package Service only:** Mailer Move Update Process Certification and USPS®-approved alternative methods for mailers with legitimate restrictions on incorporating USPS-supplied change-of-address information into their mailing lists.